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ABSTRACT

An empirical analysis used data for 12 European countries from the 1988-1997 European Community Labour Force Survey to assess the effects of cyclical changes in aggregate economic conditions, changing youth cohort sizes, increasing educational expansion, and structural changes in labor demand on new labor force participants. Emphasis was on the unemployment risks and occupational allocations of these labor market entrants. The study found that unemployment risks have closely followed the evolution of aggregate economic conditions with only a little impact from demographic factors. Changes in occupational allocation, in turn, are much dependent on the relative evolution of educational expansion and professionalization tendencies. In addition, these trends do not affect all educational leavers evenly. The lowest qualified are most heavily affected by cyclical changes in economic conditions, while leavers from university-level education have been more strongly affected by trends of changing occupational attainment. Increasing labor force professionalization is found to contribute to increasing labor market difficulties among the lowest qualified. (Contains 83 references.) (KC)

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Changing Labour Markets and Early Career Outcomes: Labour Market Entry in Europe over the Past Decade

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Markus Gangl

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Editorial Note:

Markus Gangl is research fellow at the Mannheim Centre for European Social Research (MZES). He is currently involved in the European research network "A Comparative Analysis of Transitions from Education to Work in Europe" (CATEWE), funded under the TSER programme of the European Commission. The working paper resulted out of that project.

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Abstract

The paper addresses the issue of the driving forces behind recent changes in labour market entry outcomes in Europe. Based on data for 12 European countries from the 1988-1997 European Community Labour Force Survey, the empirical analyses estimate panel data models to assess the effects of cyclical changes in aggregate economic conditions, changing youth cohort sizes, increasing educational expansion and structural changes in labour demand on market entrants unemployment risks and occupational allocation. In general, it is found that unemployment risks have closely followed the evolution of aggregate economic conditions with only little impact of demographic factors. Changes in occupational allocation, in turn, are much dependent on the relative evolution of educational expansion and professionalization tendencies. In addition, these trends do not affect all leavers evenly: the lowest qualified are most heavily affected by cyclical changes in economic conditions, while leavers from tertiary level education have been more strongly affected by trends of changing occupational attainment. Most discomforting, however, increasing labour force professionalization is found to contribute to increasing labour market difficulties among the lowest qualified.

Introduction*

A concern for the changing nature of education-to-work transitions is widespread throughout current studies of early labour force careers. Issues to be tackled abound: to what extent do recent upsurges in youth unemployment rates reflect a changing world economy and an increasing exclusion of the least skilled in Western economies? Is there a general trend towards the devaluation of qualifications in conjunction with a credentialist rat race towards achieving ever higher levels of education, leaving the least able unfailingly behind? Do traditional and relatively stable trajectories into working life dissolve in favour of individualistic and erratic job hopping patterns? Despite the prevalence of such rhetorics of change and the doubtless relevance of changing economic context conditions for understanding and explaining recent changes in the relation between education and early career trajectories, the available evidence is limited at best (e.g. Blossfeld, 1986, 1989; Konietzka, 1998, 1999; OECD, 1998 for exceptions), not the least due to lack of adequate data sources from where mid- or even longer-term labour market change could be effectively studied. This is unfortunate for any structurally-minded approach to the study of labour force entry outcomes as more easily available information on individual characteristics of those entering into working life has come to play a more prominent role in empirical analysis than theory would necessarily suggest. More awkwardly, the impacts of more structural context conditions providing opportunities and constraints to young people entering the labour force are regularly not even addressed in the interpretation of results, even if changes in labour market outcomes or the stratification processes generating them are diagnosed.

This reasoning should, however, not be read as downplaying the role of individual action, resources and stratification processes related to them in generating labour force careers. Rather, the argument is that observed changes in transition outcomes should first and foremost be understood from what is called period effects in the terminology of life course research, i.e. varying structural context conditions which excert effects on all current participants in the labour market as they reflect the changing balances of various forces determining competition and allocation on the market, thus framing relevant behaviour and decisions within the broader structural context. Seen this way, the economic context in labour markets, broadly understood, is evidently a main factor shaping education-to-work transitions and their changing nature over time. As labour markets tighten, competition for jobs aggravates, potentially largely at the expense of those having entered the market only recently who lack work experience and longer-term attachments to a specific employer, rendering them much more vulnerable to job separations and dismissals. Similarly, the more long-term trends of educational expansion and the changing occupational structure might impact on early labour market outcomes as patterns of occupational allocation change, traditional trajectories of entering the market become more

* This paper has been prepared as part of the CATEWE research project (A Comparative Analysis of Transitions from Education to Work in Europe), funded under the TSER programme of the European Commission (Contract SOEZ-CT97-2019-CATEWE). Extensive comments and suggestions from CATEWE members, notably Thomas Couppié, Damian Hannan, Michèle Mansuy, Walter Müller, David Raffe, Emer Smyth and Maarten Wolbers are gratefully acknowledged.

and more obsolete, new competences are required by employers and qualifications become in part devaluated by their more widespread availability. Of course, each of these trends and economic context conditions might affect different leaver groups quite differently, thus affecting the nature of social stratification in the short or medium run. Finally, the impact of such trends might or might not be similar across all countries and arguments linking institutional arrangements in training systems and labour markets to market entrants labour force outcomes can easily be extended so as to expect varying degrees of institutional sheltering from the impacts of general economic trends.

Drawing on a unique database covering 12 European countries, the paper seeks to address these effects of changing labour market conditions on early career outcomes for those having entered the labour market between the late 1980s and the late 1990s. In order to investigate into two major aspects of recent changes in transition outcomes, the analyses address market entrants' unemployment risks and their occupational allocation in the early career stages. Combining repeated cross-sectional microdata for a relatively large sample of countries over the past decade moreover allows to estimate panel data models which simultaneously control for individual and structural effects in the labour market attainment process. In doing so, the paper represents an attempt to decompose successful labour market entry into effects of individual resources and characteristics, notably in terms of qualifications, and the impact of context conditions, including both institutional differences between countries and economic differences between countries and over time. As the effects of labour market conditions on transition outcomes have – with the exception of local labour market conditions (e.g. Bynner, 1994; Evans and Heinz, 1994; Heinz, 1999) – hardly been systematically addressed, the interest of the current paper clearly is with the latter. The issues of qualification effects and their linkages to specific institutional contexts is discussed in more detail in a companion paper to the current one, which applies a similar methodology (cf. Gangl, 2000b). The following section discusses the theoretical background and hypotheses of the paper, while Section 3 describes the database and research design applied in the analyses. The empirical results are discussed in two sections, with Section 4 providing some descriptive results on trends in transition outcomes over the past decade and Section 5 containing the multivariate analyses. The results are summarized in a concluding section.

Economic Context and Changing Patterns of Labour Market Entry

Economic Context and Labour Market Entry

At a most general level, labour market outcomes are generated from the stochastic matching between available labour supply and available labour demand, representing the joint outcome from worker choice and worker opportunity in terms of vacancies and the respective evaluation processes of worker and job characteristics (cf. Fine, 1998, for a review of labour market theory and notably the more structurally oriented labour market models like queueing theory [Thurow 1975; Boudon 1974,

1982] and more recent matching models [Kalleberg/Sørensen 1979; Granovetter, 1981; Eliason, 1995; Logan, 1996]). As such, labour markets are best understood by estimating the values of workers' and employers' resources which are exchanged in the market as well as the nature of competition and rules of allocation that prevail in the market. From the workers' perspective, the labour market exchange ideally is an exchange of qualifications for work time and productivity in a given job, which is rewarded by wages, job security, promotion opportunities, fringe benefits and the like (cf. Akerlof, 1982, for a more extensive discussion). The point of departure for discussing the impact of context effects on this matching and exchange relationship is to note that these mutual evaluation processes, and consequently, labour market outcomes and the rewards and advantages attached to valued resources like e.g. education or professional experience are fundamentally relative in nature, notably relative in terms of workers and employers position in the supply and demand distributions (Coleman, 1991; Sakamoto and Powers, 1995). Economic context conditions might now be understood as a shorthand for describing the relative balance of these different components of labour market matching processes, and hence, describing the prevailing conditions of competition, allocation and matching.

This simplistic framework outlined suggests four major types of structural trends which should affect the level of matching activity as well as competition and allocation patterns on the labour market, namely contraction or expansion forces on both labour supply and labour demand versus distributional changes within the available supply of both workers and jobs. Changes in each of these four context conditions can be expected to generate a distinct labour market response as labour market matching activities adjust accordingly. Tacitly assuming non-immediate adjustment in the market and relatively fixed factors in the short run, these different effects will be discussed in turn, treating contraction/expansion forces first and turning to structural shifts in the supply and demand distributions afterwards. Contraction and expansion forces potentially apply to either labour supply or labour demand; consequently, it is distinguished between supply-side *demographic pressures* and demand-side *business cycle* effects here.[1] Either type of change will affect labour market outcomes primarily via unemployment risks as the short-term balance between supply and demand on the market is changed. Moreover, both types of changes should have offsetting and counteracting effects: increasing labour supply implies a relative oversupply of work in the short run, which leads to expect individually rising probabilities of unemployment. In turn, more buoyant labour markets imply increasing relative levels of labour demand, contributing thus to generally reduced unemployment risks. It has to be recognised, however, that the impact of these expanding or contracting forces is not necessarily neutral in terms of observed labour market stratification. Changing conditions of competition in the labour market should come mostly at the expense of the relatively least competitive individuals (Coleman, 1991; Sprengers, 1992). As competition for available jobs tightens – due to either increasing labour supply or decreasing labour demand – the relative value of the least attractive resources in the market should decline most strongly. Alternatively, one might also argue that demand

[1] Note that the available time series of a decade does not allow to differentiate between short-term cyclical or longer-term structural expansions and contractions of labour demand. Hence, I use the term business cycle as a convenient shorthand for and equivalent to labour demand expansion or contraction.

contractions occur disproportionately at the level of lower skilled employment (e.g. Bowlus, 1995; Storer, 1994). In consequence, tightened competition is expected to imply higher unemployment risks for the most recent entrants to the market in general as they lack the work experience of more adult workers and to the least qualified in particular who additionally possess the least valuable resources. To the extent that downward substitution occurs in the labour market as a consequence of match shortages, contraction trends should also lead to negative effects on occupational attainment. Of course, the respective reverse predictions apply in the case of supply contraction or demand expansion which imply loosened competition contexts in the labour market.

A second issue, which has been at the center of much social science debate, are the effects of structural changes in either the distribution of qualifications or jobs. These types of changes will be referred to as *educational expansion* and *occupational professionalization*. Both types of changes have been, in principle, firmly established for major European countries. Educational expansion has been traced back to the post-war period (e.g. Müller and Wolbers 1999; Müller/Haun 1994; Müller et al., 1997; Brauns 1998), with most recent developments occurring as substantial increases in the proportion of tertiary level graduates in the population and among market entrants in most countries. The case is less clear with respect to skill changes on the demand side (cf. Penn et al., 1994, for an overview), which are regularly discussed under the headings of upskilling, professionalization or skill-biased technological change (e.g. Gallie et al., 1998; Berman et al., 1999; Gregg and Manning, 1997), all implying a shift in labour demand to more skill intensive labour. It is, however, unclear so far whether observed trends represent a unidirectional and secular development or whether they should better be seen as part of an ongoing polarization of employment. Due to data limitations, the evolution of lower-skilled employment cannot be explored in the context of this paper and the issue has thus to be left for future research. In addition, a focus on professionalization fits well with the empirical fact of educational expansion at the tertiary level as a main trend for labour supply over the past decade.

It is argued here that these two types of structural shifts, in contrast to the expansion and contraction forces in the market discussed earlier, primarily affect occupational allocation and occupational returns to education, rather than unemployment risks (cf. the reasoning in Boudon 1974, 1982; Collins 1979). Both types of changes affect the relative availability of qualifications and particular occupations, and consequently, the relationships between qualifications and occupoational allocation: ceteris paribus, increasing availability of particular qualifications implies decreasing average levels of occupational attainment at each level of qualifications as processes of downward substitution in the system will be triggered. Increased professionalization will, in turn, increase the average levels of occupational attainment and, notably, improve the probability of securing professional employment positions as the availability of such high-skill positions increases. Clearly, both types of changes are again offsetting and counteracting factors, so that the net outcome is a question of the relative development of both trends. Existing empirical studies tend to lend partial support to these claims, although the evidence is much contested (e.g. Brauns, Müller, Steinmann, 1998; Handl, 1996; van der Ploeg, 1994; Dronkers, 1999, for analyses on educational expansion; Barrett et al., 1999; Moll, 1992; Parcel and Mueller, 1989; Sørensen and Blossfeld, 1989; Nickell and Bell, 1995; Gregg and Manning, 1997, Gallie et al.,

1998, for studies in the line of occupational upskilling and technological change). In contrast to most of these earlier studies that are restricted to a time series for single countries, the present paper holds the promise of more reliable results as a sample of several countries can be used in the analyses.

Returning to the theoretical arguments, it should be recognized that these types of changes also potentially affect the nature of stratification in early labour market outcomes. Given the nature of changes that occurred over the past decade in Europe (cf. also Section 4 below), one might expect an occupational devaluation of credentials due to educational expansion to occur mostly at the tertiary level of education as in most European countries under study it was more the relation between upper secondary and tertiary education that changed rather than a further decline of low educational achievement (cf. Müller and Wolbers, 2000). In a similar vein, the increasing demand for professional employment should by and large come to the benefit of tertiary level educated leavers from the educational system, so that, in sum, changes in labour market stratification in terms of occupational outcomes should mainly result from net changes in the relative positions of the top qualified, while floor effects for occupational allocation among the least qualified should work against much change there. As in the case of demographic and cyclical effects discussed above, one could finally also argue about side effects of educational expansion and labour market professionalization on market entrants' risk of unemployment. To the extent that skill or credential requirements increase, unemployment risks might rise as well, notably of course among the least qualified so that the concentration of unemployment among this group should increase.

Institutional Labour Market Contexts and Changing Economic Conditions

Following the outline of some general mechanisms linking changing economic contexts to changing labour force outcomes of market entrants, comparative analysis not only provides the opportunity to test the hypotheses developed above but also an approach to explore whether the proposed relationships hold in general or whether particular institutional arrangements in labour markets might actually serve to attentuate (or exaggerate) the impact of changing economic context conditions on labour market entrants' initial career experiences.

At a fairly general level, previous research on education-to-work transitions has regularly contrasted two polar types of institutional arrangements in European labour markets, namely occupational labour market systems (OLM) versus internal labour market systems (ILM), where the former type of systems is said to operate in countries with strongly vocationally oriented training like Germany, Austria, Denmark or the Netherlands (Müller and Shavit, 1998; Shavit and Müller, 2000, forthcoming; Hannan et al., 1999; Allmendinger, 1989; Kerckhoff, 1995, forthcoming; Marsden 1986, 1990; Marsden and Ryan, 1995; Maurice et al, 1986). Apart from the discussion of the role of education in either type of institutional labour market context, some observers have also commented on the implications of the rigidities present in the ideal-typical OLM context as compared to more flexible labour market structures (Blossfeld, 1992; Hannan et al., 1999). If the structure of external markets is more heavily segmented along occupational lines in the former systems, this by definition implies smaller

substitution potentials across submarkets, which might slow down adaptation processes due to structural change (cf. DiPrete et al., 1997; Blossfeld, 1992). In terms of the concerns raised above, there are two implications with respect to occupational attainment of market entrants and its responsiveness to particular economic changes: first, the detrimental effects of educational expansion should be attenuated in OLM systems as the occupationalized nature of job competition and available skills makes downward substitution processes less attractive. On the other hand, as labour force experience is a less valued resource in job competition in an OLM context, market entrants should be able to benefit to a relatively larger degree from the increasing availability of attractive professional employment positions.

The issue of flexible versus more regulated institutional labour market contexts might, moreover, also bear on the relation between aggregate economic conditions and market entrants' risk of unemployment. If, in general, more flexible employment regulation in (youth) labour markets allow to a larger extent to pass on the consequences of cyclical economic up- and downswings to workers, unemployment risks should fluctuate cyclically most strongly in the institutionally most flexible systems. This leads to expect an interaction effect in terms of the magnitude of cyclical effects on market entrants' unemployment risks, which would contrast not only the fairly regulated labour markets of OLM, but also the strictly regulated Southern European labour markets to the relatively most flexible ones in the so-called ILM systems (cf. Grubb and Wells, 1993; OECD, 1999; Hartog and Theeuwes, 1993 for overviews). The empirical analyses will now begin to explore these and the above notions in more detail.

Data and Methodology

Following the above introduction, this paper provides a set of comparative analyses of labour market entry in the countries of the European Union in the late 1980s and early to mid-1990s, focusing primarily on the impacts of changing economic contexts on market entrants' transition outcomes. In these analyses, data for twelve European countries is used, drawing on the 1988-1997 European Community Labour Force Surveys.[2] This database provides standardised, cross-sectional information on labour force participation, unemployment and various aspects of employment compiled from EU member states' national Labour Force Surveys. The surveys themselves consist of large-scale national samples which are at least repeated annually, thus providing a unique database of repeated

[2] This data has kindly been provided by EUROSTAT, the Statistical Office of the European Union. Of course, EUROSTAT is neither responsible for the uses made of the data nor the views held by the author. The twelve countries chosen for analyses are Austria, Belgium, Denmark, France, Germany, Greece, Ireland, Italy, the Netherlands, Portugal, Spain and the United Kingdom. Luxembourg is excluded for reasons of small sample sizes giving unreliable results, while Finland and Sweden had to be excluded as occupational information is only provided in 1997. For the chosen set of countries, single annual observations were excluded due to breaks in (part of) the time series or other unreliabilities, mostly related to substantial changes in the coverage of current training activities or the coding of educational qualifications (France and the Netherlands before 1993 and 1992, respectively; Belgium, Denmark and Ireland in 1992). Data on Austria is only available since 1995, when that country joined the European Union.

cross-sectional surveys of labour market behaviour and employment issues in EU countries (cf. EUROSTAT 1988, 1992, 1996, for extensive details on the database). The analyses themselves address the responsiveness of labour market outcomes for market entrants from four educational levels to changing economic context conditions over the last decade. Market entrants are defined as those individuals as who left the education and training system within the last five years.[3] Educational levels are distinguished according to the International Standard Classification of Education (ISCED; UNESCO, 1975), i.e.: ISCED levels 0-2 or having attained no more than lower secondary qualifications, ISCED level 3 or having attained upper secondary education, ISCED level 5 or having attained post-secondary or lower tertiary qualifications, and ISCED levels 6-7 or having attained full university or Ph.D. degrees.

Based on the ECLFS dataset, unemployment risks and occupational attainment are analyzed as two main aspects of early labour market attainment. With respect to employment and unemployment, the ECLFS database follows standard international ILO definitions (cf. ILO, 1990a), while occupations are classified according to the 2-digit ISCO-68 codes until 1991, while the ISCO-88 COM scheme at the 3-digit level is applied since 1992 (cf. ILO 1990b, EUROSTAT 1988, 1992, 1996). In the current paper, a small modification to the ILO concept of employment is applied: in an analysis of early labour market experiences and the transition from education to work, it appears unwarranted to include all individuals having worked for payment or profit without paying attention to any current participation in education and training, which might actually represent their primary status. Deviating from standard ILO procedures, all individuals participating in any kind of initial formal education and training are therefore excluded from the labour force.[4] After all, market entrants are thus defined as individuals having (intermittently, if only) completed their educational careers. For this group, labour market outcomes are investigated in terms of unemployment risks in early careers and initial occupational allocation, the latter being measured in terms of occupational status and the attainment of professional employment positions. Below, Overview 1 provides more specific details on the measurement of each concept.

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[3] As individual time of leaving education is unavailable from the database, the timing of market entry is proxied by typical graduation ages for the different levels and types of education as published by OECD (1997).

[4] This rather open and imprecise formulation is meant to include participation in those regulated forms of training which might be considered in some way as ‚initial', while excluding those types of of part-time education which serve to enhance indiciduai qualifications while already working. Attending university, upper secondary schools or dual-system types of training would be examples of the former; attending evening

Overview 1	
Employment & Labour Force	Modified ILO international definition of employment / labour market participation (cf. ILO 1990a): participation in initial training considered as primary status
Unemployment	ILO international definition of unemployment (cf. ILO 1990a)
Occupational Status	ISEI international socio-economic index score (cf. Ganzeboom et al., 1992; 1996) matched at the level of 2-digit ISCO-68 (1988-1991) and 3-digit ISCO88-COM (1992-1997) occupational detail
Professional Employment	Professional occupation according to ISCO classification (cf. ILO 1990b): ISCO68, 2-digit: 1-21, 35, 40, 50 (ECLFS 1988-1991) ISCO88-COM, 2-digit: 11, 12, 21-33 (ECLFS 1992-1997) (e.g. teaching and scientific professionals, managers, architects, health professionals, technicians)

In the current analyses, these individual-level measures are complemented by a set of context factor measures, which are conceived of as including both *institutional variables* and *labour market context factors*. As introduced in the theoretical section above, the variable characterizing institutional labour market contexts amounts to a simple differentiation between the three country clusters discussed earlier: Austria, Denmark, Germany and the Netherlands are classified as OLM systems, the four Southern European countries Greece, Italy, Portugal and Spain are grouped together in another country cluster, while the remaining Northern European countries Belgium, France, Ireland, and the United Kingdom will be referred to as ILM systems. More interesting to the current paper are four macrolevel measures introduced, indexing the four types of structural changes in economic contexts identified in the theoretical reasoning above. Following the arguments made there, the analyses include (a) the demographic size of youth cohorts in terms of the youth-adult ratio in the labour force, i.e. the ratio of market entrants to experienced workers in the total labour force aged 15-59, following the sample specifications detailed above; (b) the aggregate unemployment rate in the total labour force aged 15-59, indexing aggregate economic conditions and business cycle fluctuations, (c) the extent of educational expansion as captured by the proportion of tertiary-level – i.e. ISCED 5-7 – qualified individuals in the total labour force, and (d) the extent of labour market professionalization as measured by the proportion of professional employment positions (as defined in Overview 1) among total employment.[5] All measures are based on estimates from the ECLFS database for 98 country level observations, i.e. 12 sample countries times 3-10 annual observations. The analyses themselves utilize within-country mean-centered values to characterize within-country changes in economic contexts; this type of centering allows to separate genuine trend effects from level effects between countries.

schools or firm-based training courses examples for the latter. Full details of coding are available from the author on request.

[5] The results to be reported below are qualitatively unaffected by replacing the first two indicators by employment growth and changes in entry cohort sizes.

Summarizing the theoretical discussion in operational terms, I expect the following effects for each of these for trend factors:

H1 *Business cycle effects*: Increasing unemployment rates lead to increasing risks of unemployment among labour market entrants. As relatively less competitive market participants, recent entrants to the market are disproportionally affected. This effect also interacts negatively with the individual level of qualifications, so that the lowest qualified are affected most strongly. Business cycle effects should, moreover, have the strongest impact on initial career outcomes in the most flexible ILM arrangements. Effects of cyclically increasing unemployment rates on occupational allocation are, finally, weak in general and theoretically indeterminate.

H2 *Demographic effects*: Parallel to H1 above, increasing youth cohort sizes are expected to imply increasing risks of unemployment, again potentially disproportionately affecting the least qualified school leavers. Effects on occupational allocation are weak and negative, if present.

H3 *Educational expansion effects*: Increasing levels of tertiary education in the labour force lead to a devaluation of qualifications in terms of occupational allocation. Due to downward substitution processes triggered, the strongest effects will be on occupational outcomes for tertiary level leavers. In the context of occupational labour markets, downward substitution tendencies should be attenuated. Effects of educational expansion on unemployment risks are potentially positive but small.

H4 *Professionalization effects*: Increasing availability of professional employment positions implies increasing levels of occupational attainment among market entrants, with the impact again being most relevant among tertiary level leavers. In the context of occupational labour markets, market entrants should be relatively more competitive and thus benefit relatively stronger from the increasing availability of professional employment. To the extent that skill requirements rise in the context of changing labour demand, unemployment risks among market entrants will increase, notably at the lower levels of qualifications.

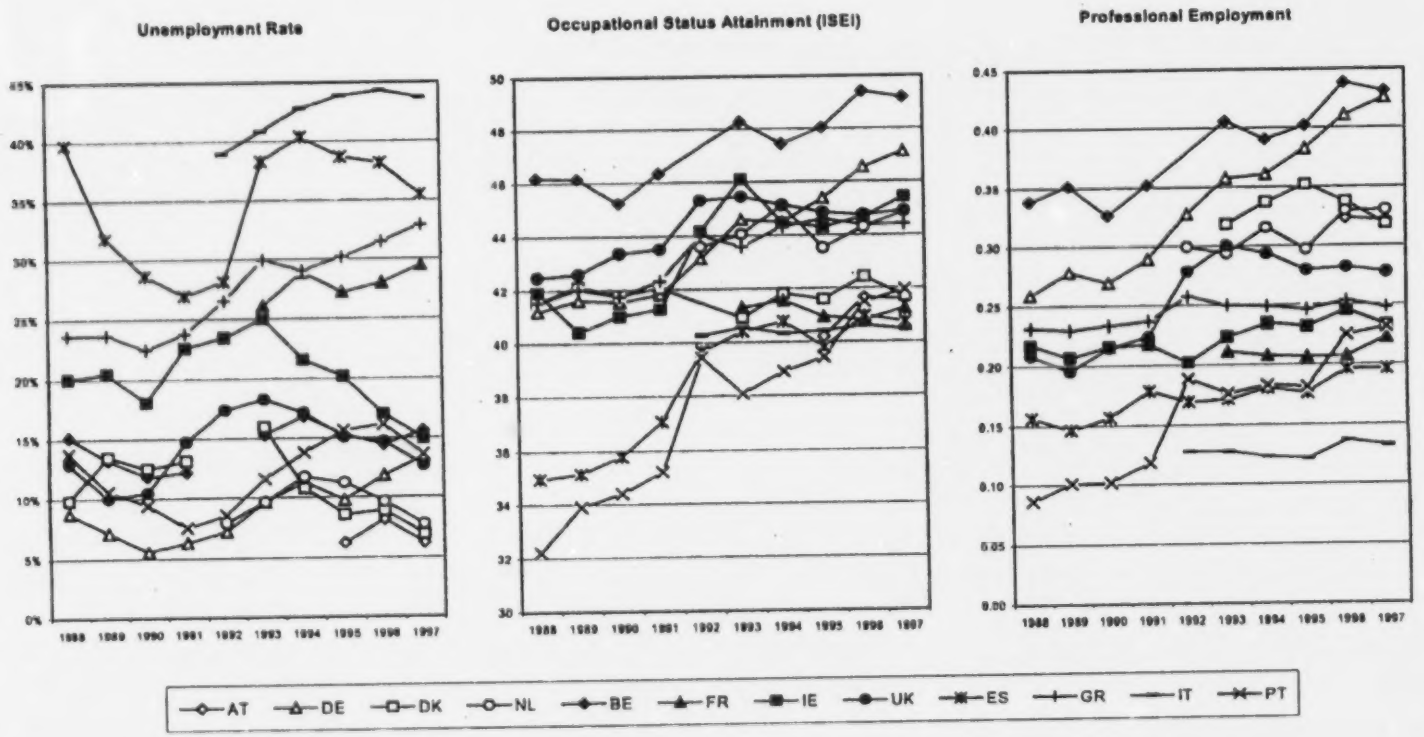
Before providing tests of these hypotheses from multivariate models, the paper will first present descriptive evidence on trends in both early labour market outcomes and aggregate economic and labour market conditions over the last decade in the twelve EU countries under study. Their interrelations and the impact of changes in aggregate context conditions will then be assessed from comparative micro-macro models, controlling simultaneously for individual resources, institutional and economic context factors, and unobserved heterogeneity between countries and qualifications. This modelling strategy follows in a straightforward manner from the repeated cross-sectional research design of the database used (cf. Blalock, 1984; Judge et al., 1985; Greene, 1997; DiPrete/Grusky 1990a, 1990b) and the time-series cross-sectional structure of the data. More specifically, I estimate a set of panel data models applying Liang and Zeger's (1986; Diggle et al., 1994) GEE estimation approach which extends traditional generalized linear modelling based on cross-sectional data (cf. McCullagh and Nelders, 1989). Effectively, this represents a time-series analysis for the average

labour force outcomes of market entrants from 48 educational backgrounds between 1988 and 1997. Compared to the alternative of estimating genuine multi-level models, the approach might be considered as the more robust option of estimation in the case of a fairly small number of aggregate units of analysis, as the marginal estimation method does not require to specify and estimate mixtures of distributions. In addition to the time-varying measures of economic context conditions, all estimated models control for the effects of levels of education and their interaction with the institutional labour market context (cf. Gangl, 2000b, for an extensive analysis of this aspect) and allow for a first-order autoregressive error structure. The calculation of standard errors and hypothesis tests is adjusted for the clustering on 48 educational groups. The dichotomous dependent variables of unemployment and attainment of professional employment are modelled by specifying a binomial distribution and a logit link function, occupational status is specified to follow a normal distribution with a logarithmic link function.

Trends in Transition Outcomes and Economic Contexts across Europe

As a first look on the data, Figure 1 below gives the evolution of aggregate labour market outcomes for market entrants in the twelve European countries between 1988 and 1997. In general, the trends exhibit marked cross-national variation, although less so with respect to changes in occupational allocation outcomes. With respect to both occupational status attainment and access to professional employment positions, the situation of employed market entrants improved in many if not most European countries over the decade, and did certainly not deterioriate in any country. Where occupational allocation outcomes improved, aggregate gains are often moderate only, but in some countries considerably increasing levels of occupational attainment are evident: average occupational status attainment increased markedly in Spain and Portugal, but also in Germany and Belgium. The results for access to professional employment are similar. Aggregate trends with respect to unemployment are less easily summarized. For most countries, there is evidence of strongly cyclical patterns in the evolution of market entrants' unemployment rates, with falling rates up to the early 1990s and from mid- to late 1990s, while unemployment was on the rise over the early 1990s. There is substantial variation, however, in both the timing and the extent of swings observed. In most countries, unemployment rates rose by around 5% points in the early 1990s, sometimes even more, with a time lag of about three years between Britain and Ireland on the one hand, and Spain and Portugal on the other. In many countries market entrants' unemployment rates declined again since around the mid-1990s, markedly in Ireland and Denmark for example. In contrast, unemployment rates in Italy, France, Greece or Germany had not even begun to decline by 1997.

Figure 1 Recent Trends in Transition Outcomes across Europe

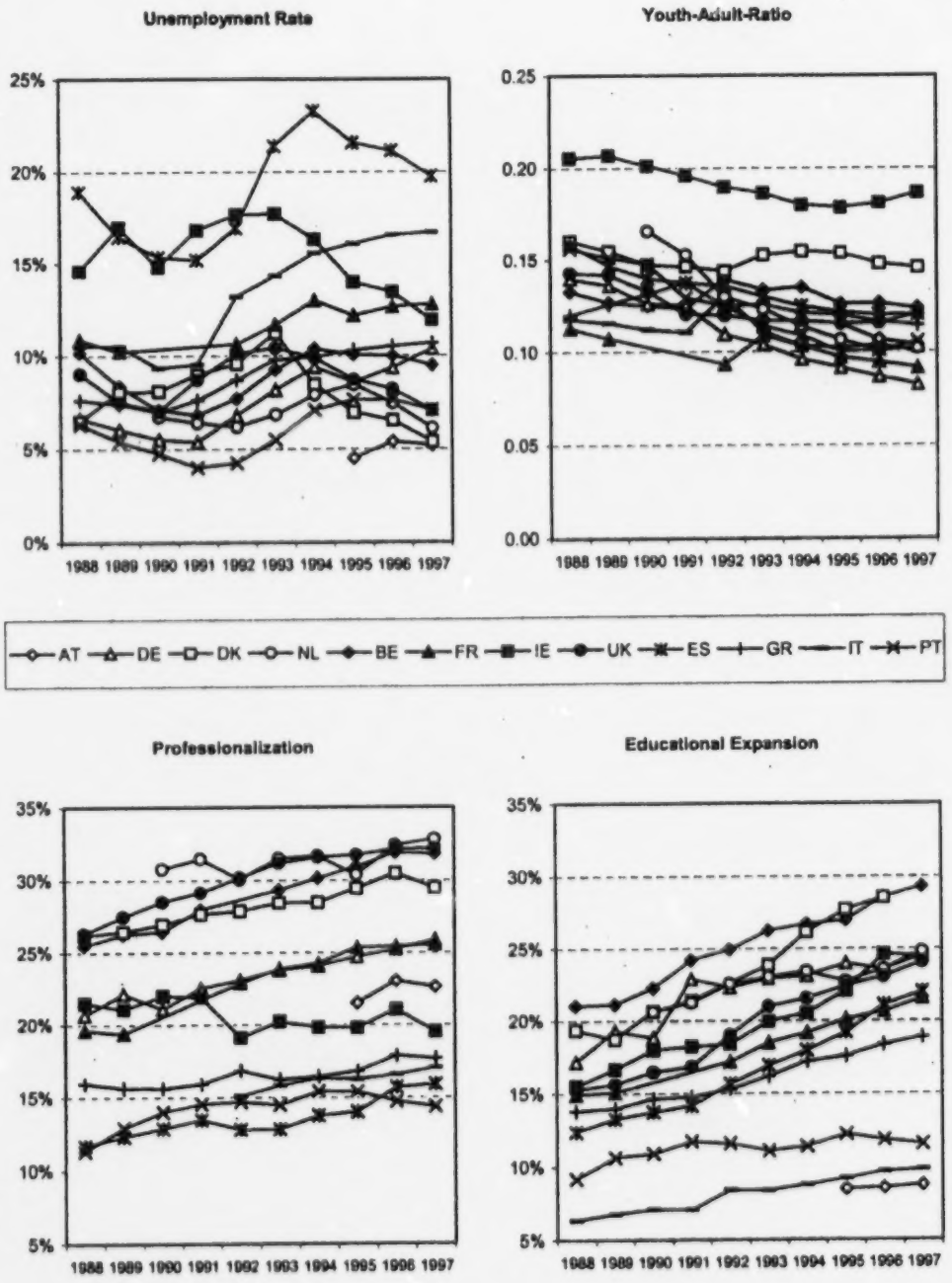


Sources:
European Community Labour Force Survey 1988-1997

Necessarily, these aggregate figures ignore important aspects of differentiation in labour market outcomes, be it in terms of qualifications, gender, social background or ethnicity. Disaggregated trends might look very different from the picture presented here, as improving economic conditions will not affect all individuals evenly and not all market entrants will be able to successfully participate in current economic restructuring towards a more professionalized labour force. Space limitations prevent us from pursuing these explorations further here, but it might be interesting to note that the breakdown by educational levels as provided in Gangl and Brauns (1999) indeed suggests more differentiated interpretations in this case: for example, it is apparent from their results that unemployment risks fluctuate mainly among the lowest qualified, while more educated market leavers were much less affected by cyclical up- and downswings. In contrast, hardly any changes were observed in the case of occupational allocation by educational level, except for declining occupational returns to higher education in a few countries. That is, rising average levels of occupational attainment reflect compositional effects, sometimes even occurring in combination with slightly decreasing microlevel returns to education. More differentiated answers than the simple macrolevel information provided will also come from the multivariate analyses in the next section; for the moment, I turn to describe the main aggregate trends in the total labour force, however.

At face value, the trends described for market entrants' unemployment outcomes and occupational allocation patterns seem to fit quite well with the general trends in European labour markets as depicted in Figure 2. Ignoring for the moment level differences between the countries and some country differences in the timing of the economic recession in the early 1990s, the major trends in labour market conditions have been surprisingly similar over the past decade across EU countries. In all countries, youth cohort sizes declined both in relative terms as given by the market entrants-to-adult workers ratio in the figure and, at least in most countries, also in absolute numbers. Similarly, the proportion of tertiary level qualifications in the labour force expanded in most countries over the decade, regularly by as much as 5%-10% points. Almost the same figure applies to the case of increasing professionalization of the labour force, where increases by about 5% points over the decade are common, at least among Northern European countries. The growth of professional employment has been slower in Southern Europe, but also in Ireland. Ireland, by the way, stands apart from the rest of Europe also in other respects, namely the highest youth-adult ratio among the twelve countries and the by far most positive development of aggregate unemployment since the early 1990s.

Figure 2 Recent Changes in Economic Context Conditions across Europe



Sources:
European Community Labour Force Survey 1988-1997

Arguably, the largest cross-national variation in terms of labour market trends is precisely in the evolution of the unemployment rate over the decade, notably in the timing of the recession in the 1990s and the timing and extent of economic upswing afterwards. Britain and Ireland have been the countries that were first to experience rising unemployment rates since around 1990, while for other countries like Portugal, Spain or even the Netherlands, recessionary trends started only in 1993. Of course, the extent of this recessionary downswing varied greatly – as did the economic resurgence of the mid-1990s. Since then, the economic climate improved markedly in countries like Ireland, Denmark, and the United Kingdom, while other major European economies like France, Germany or Italy had large difficulties to recover. Without entering into the description of these trends any further, the main results for this last decade may be summarized as fairly global trends of declining youth cohort sizes, increasing expansion of third level education and an increasing professionalization of the labour force. These broad trends have occurred in conjunction with an aggregate economic climate which, in general, was relatively favourable in the late 1980s and late 1990s, yet less so during the early to mid-1990s. In addition, cross-national variation in the evolution of aggregate unemployment rates was substantially more marked than with respect to any of the other three trends. How these changes in economic context conditions have affected young peoples' labour market outcomes is detailed in the following section which reports estimation results based on panel data modelling.

Economic Context Effects in Micro-Macro Models of Labour Market Entry

Certainly, successful labour market entry very much depends on individual qualifications, individual social background, personal and institutional networks to particular employers and the presence of particular gender or ethnic life course stratification patterns. But, as evident from the estimated multivariate models, changes in economic context conditions excerted important direct impacts on the smoothness of education-to-work transitions in the 12 European countries over the past decade. Tables 1 to 3 provide the necessary details on the estimation results: Table 1 contains the main estimation results, Table 2 holds selected statistics based on predicted probabilities and Table 3, finally, presents results from detailed statistical tests for interaction effects between context conditions and level of education, respectively type of institutional labour market context. In the presentation, the discussion of results will be restricted to the issue of changing economic context conditions, at the expense of the microlevel educational effects and their interaction with institutional labour market contexts which are simultaneously estimated in the models (but cf. Gangl, 2000b for a thorough analysis). It might be sufficient to note the standard results of a negative relationship between level of education and unemployment risks and a positive relationship between education and occupational attainment. In addition, educational effects are, in general, found to be slightly more pronounced in OLM contexts as compared to the set of ILM countries. Southern Europe, finally, sharply deviates from

the Northern European countries by absent educational differentiation with respect to unemployment.[6] I now turn, however, to the original focus of the analyses and discuss the effects of different types of changes in economic context conditions on market entrants' early career experiences.

Aggregate Economic Conditions and Youth Cohort Sizes

I begin the discussion of results with the two "quantity" aspects of supply and demand, namely the state of the business cycle and the demographic relation between market entrants and adult workers in the labour force. According to the estimates given in Table 1, there is ample evidence of the expected strong positive cyclical effects on market entrants' unemployment risks, which is hardly sensitive to the particular model specification adopted. In contrast, there are no substantial cyclical effects on patterns of occupational allocation, neither in terms of the main nor in terms of any interaction effect. What is interesting with respect to the effects on unemployment, however, is the additional evidence on interaction effects in that case. First, it should be noted that the inherent non-linearity of the logit probability model itself implies varying effect sizes in terms of absolute probabilities. A linear main effect on the logit of unemployment translates into relatively small effects on the probability of interest in both tails of the distribution (i.e. at very high and at very low unemployment rates), while probability effect sizes reach a maximum at p = .5. Hence, even model M1, which includes only the main effect, predicts that absolute unemployment rates vary more strongly among the high-risk lowest qualified than among the low-risk tertiary level leavers. But even if relying on the relative risk interpretation of the model, interaction effects apart from model non-linearity are apparent. Tertiary level leavers, notably leavers from lower tertiary education, are less affected by cyclical changes in aggregate economic conditions (β=0.091-0.054=0.037 and 0.091-0.004=0.087, respectively) than leavers from upper secondary education (β=0.112) and even markedly more so than those leaving from lower secondary education (β=0.091-(0.021-0.054-0.004)=0.128). The experiences of entering the labour market of that latter group are clearly very responsive to the current economic climate. Given the non-linearities of the logit model and the presence of interaction effects, their combined effect on young people's unemployment risks is probably best illustrated by considering the examples of predicted probabilities given in Table 2. The first row in the results section on unemployment shows that an increase of the aggregate unemployment rate of 1% implies an expected increase of unemployment risks among the lowest qualified market entrants by 3%, while the respective figures among tertiary level leavers are 0.5% and 1.1% only.[7] Despite the small number of aggregate units of analysis, most of these reported differences also turn out to be statistically significant at conventional levels of significance according to the Wald test calculations reported in Table 3.

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[6] Full estimation results are available from the author on request.

[7] The reader is reminded of the population-averaged interpretation of estimated effects. That is, the inference is to the population-average difference in unemployment levels at varying context conditions. If anything, population-averaged effects ultimately are a lower bound to the individual-level effect estimates.

Table 1 Economic Context Effects on Labour Market Entry Outcomes, GEE Estimation

	Unemployment				Occupational Status Attainment				Professional Employment			
	M1	M2a	M2b	M3	M1	M2a	M2b	M3	M1	M2a	M2b	M3
Business Cycle	0.112*	0.091*	0.128*	0.107*	0.001	0.001	0.000	0.001	0.010	0.015	0.006	0.009
Business Cycle x ISCED 3		0.021*		0.014		0.000		0.000		-0.009		-0.006
Business Cycle x ISCED 5		-0.054*		-0.049*		-0.003		-0.003		-0.010		-0.010
Business Cycle x ISCED 6/7		-0.004		-0.001		0.002		0.001		-0.005		-0.002
Business Cycle x OLM Systems			0.020	0.015			-0.002	-0.002			-0.019	-0.015
Business Cycle x Southern Systems			-0.033*	-0.031*			0.001	0.001			0.006	0.005
Youth-Adult Ratio	0.001	-0.003	-0.003	-0.005*	0.001*	0.001*	0.001	0.001	0.002	0.001	0.003	0.002
Youth-Adult Ratio x ISCED 3		0.000		-0.001		0.000		0.000		-0.006*		-0.006*
Youth-Adult Ratio x ISCED 5		-0.013*		-0.010*		0.001		0.001		0.005		0.004
Youth-Adult Ratio x ISCED 6/7		0.005		0.005		0.000		0.000		0.007*		0.007*
Youth-Adult Ratio x OLM Systems			-0.002	-0.001			0.000	0.000			-0.003	-0.003
Youth-Adult Ratio x Southern Systems			0.006*	0.005*			0.000	0.000			0.002	0.003
Educational Expansion	0.017	0.020	0.024*	0.028*	-0.005*	-0.005*	-0.007*	-0.007*	-0.041*	-0.043*	-0.052*	-0.053*
Educational Expansion x ISCED 3		-0.001		-0.006		-0.004		-0.003		-0.004		-0.008
Educational Expansion x ISCED 5		0.025		0.031		-0.001		-0.001		-0.031		-0.025
Educational Expansion x ISCED 6/7		-0.021		-0.017		0.000		0.000		0.015		0.018
Educational Expansion x OLM Systems			0.005	0.000			0.001	0.001			0.011	0.011
Educational Exp. x Southern Systems			-0.023*	-0.018			-0.004	-0.004			-0.023	-0.023
Professionalization	0.013	-0.021	-0.008	-0.036	0.010*	0.008*	0.011*	0.009*	0.054*	0.049*	0.071*	0.065*
Professionalization x ISCED 3		-0.012		-0.016		0.002		0.002		-0.029		-0.036
Professionalization x ISCED 5		-0.088		-0.083		0.001		0.000		0.070		0.071
Professionalization x ISCED 6/7		0.020		0.020		0.005		0.005		0.024		0.019
Professionalization x OLM Systems			-0.016	-0.003			0.008	0.008			0.029	0.032
Professionalization x Southern Systems			0.004	-0.006			-0.001	-0.001			0.019	0.019
$\rho_{AR(1)}$	0.93	0.95	0.94	0.95	0.90	0.90	0.92	0.92	0.89	0.90	0.90	0.91
Wald Test / χ^2 (df = 15, 27, 23, 35)	1,205	5,952	2,898	43,820	2,705	5,300	5,252	61,178	12,983	26,153	11,436	26,143

Notes: N = 386 annual observations for 48 educational groups from 12 countries; statistical significance at *p<.05; all variables are entered effect-coded and mean-centered; equations for occupational status attainment include country-level dummy variables for the years 1992-1997; all models include an education main effect and interaction effects between education and institutional system, which have been omitted for presentation; all model Wald tests are statistically significant at p<.01.

Source: European Community Labour Force Survey 1988-1997

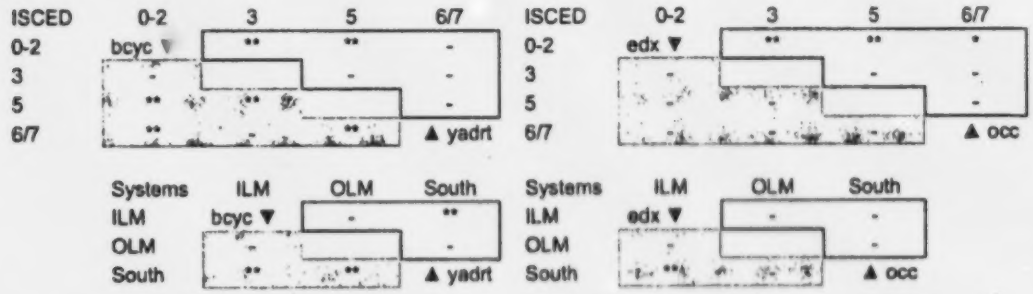
Table 2 Effect Predictions of Changing Economic Contexts

	At grand mean	By Education				Institutional System x Trend Interaction Effects		
		ISCED 0-2	ISCED 3	ISCED 5	ISCED 6/7	ILM	OLM	South
Unemployment Rate								
Average Prediction	0.154	0.286	0.194	0.086	0.107	0.154	0.154	0.154
Labour Market Trends (Unit effects)								
Business Cycle	+0.014	+0.030	+0.020	+0.005	+0.011	+0.017	+0.017	+0.010
Youth-Adult Ratio	-0.001	+0.000	-0.001	-0.001	+0.000	-0.001	-0.001	+0.000
Educational Expansion	+0.004	+0.004	+0.003	+0.005	+0.001	+0.006	+0.004	+0.001
Professionalization	-0.005	+0.009	-0.008	-0.009	-0.002	-0.003	-0.005	-0.005
Occupational Status Attainment								
Average Prediction	49.84	36.18	43.62	56.86	68.79	49.84	49.84	49.84
Labour Market Trends (Unit effects)								
Business Cycle	+0.03	+0.09	+0.01	-0.15	+0.14	+0.06	-0.06	+0.08
Youth-Adult Ratio	+0.03	+0.00	+0.01	+0.08	+0.02	+0.02	+0.02	+0.04
Educational Expansion	-0.34	-0.10	-0.44	-0.42	-0.45	-0.19	-0.28	-0.54
Professionalization	+0.45	+0.07	+0.48	+0.54	+0.95	+0.09	+0.85	+0.41
Probability of Professional Employment								
Average Prediction	0.226	0.039	0.102	0.417	0.684	0.226	0.226	0.226
Labour Market Trends (Unit effects)								
Business Cycle	+0.002	+0.001	+0.000	+0.000	+0.001	+0.003	-0.001	+0.002
Youth-Adult Ratio	+0.000	+0.000	+0.000	+0.002	+0.002	+0.000	+0.000	+0.001
Educational Expansion	-0.009	-0.001	-0.005	-0.019	-0.008	-0.007	-0.007	-0.013
Professionalization	+0.012	+0.000	+0.003	+0.034	+0.018	+0.003	+0.017	+0.015

Notes: discrete change and unit effects based on estimated parameters of GEE models (cf. cols. M3 of Table 1), evaluated at the mean of covariates

Table 3 Wald Tests on Interaction Effects

Unemployment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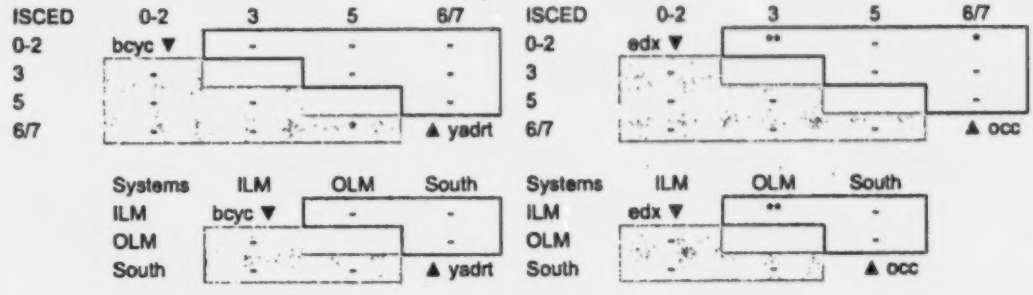
Occupational Status Attainment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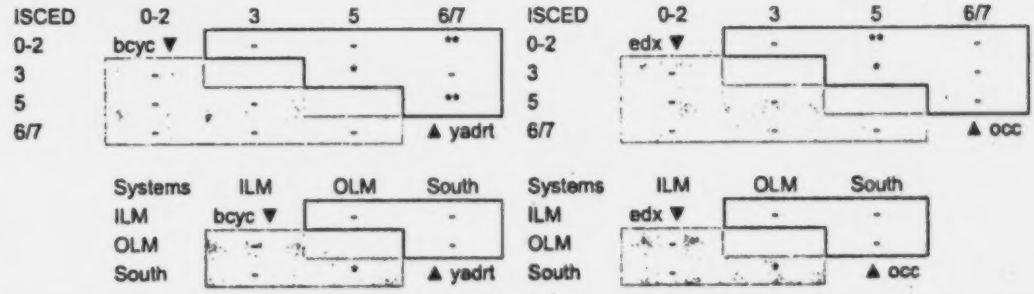
Professional Employment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Notes: bcyc – business cycle; yadrt – youth-adult ratio; edx – educational expansion; occ – professionalization; significance levels * p<.05 and ** p<.10; all tests based on models M3 of Table 1.

In addition to this interaction between education and the impact of cyclical changes, there is an indication of a somewhat smaller cyclical responsiveness of market entrants' unemployment in Southern Europe. The respective statistical tests all pass significance levels of p<.05 (cf. Tables 1 and 3), and the predicted probability at the grand mean provided in Table 2 implies an effect of only about half the size of that in Northern Europe. Given this contrast with both the ILM and OLM types of

Northern European countries, it seems unlikely that this effect can be interpreted as a relatively more stringent protection already in early careers due to strict employment legislation in the South. In conjunction with the regularly exceedingly high levels of youth unemployment in Southern countries, one might rather assume a somewhat different nature of cyclical unemployment patterns. If cyclical unemployment in the South were less concentrated among the least experienced in the work force as compared to Northern countries, this would also be consistent with the established interaction effect.

Given these rich results on the impact of aggregate economic conditions on market entrants' initial labour force outcomes, the absence of any effects of demographic factors may appear strange. There is no evidence that declining youth-adult ratios contributed to an easing of transitions into working life over the past decade, neither in terms of unemployment nor with respect to occupational allocation. In all estimated models, the effects of this factor are weak, only rarely reach statistical significance, and if so, are (at least for Northern European countries) associated with an unexpected negative sign with respect to unemployment. In sum, the evidence on demographic effects of changing youth cohort sizes is far from compelling. For much of the recent decade, changes in the incidence of unemployment in the transition period stemmed from changing aggregate economic conditions rather than from changes in demographic conditions.

Educational Expansion and Occupational Professionalization

While changing aggregate economic conditions have been the driving force behind changing unemployment risks, educational expansion and professionalization trends have had a similar role with respect to changing patterns of occupational allocation. Both types of changes consistently show the expected and counteracting effects on market entrants' initial occupational attainment, both in terms of occupational status and in terms of access to professional employment positions. In all models for occupational attainment, there is a negative effect of educational expansion, accompanied by an offsetting positive effect of professionalization tendencies of roughly similar size. Evaluated at the grand mean of the sample of educational groups, an increase of the proportion of tertiary level graduates in the labour force is estimated to imply a –0.34 status score point reduction and a –0.9% reduction in the probability of professional employment on average (cf. Table 2). By the same token, a 1% increase in the proportion of professional positions results in an average increase of 0.45 status score points and a +1.2% increase in the probability of professional employment, respectively. That is, and further qualifications notwithstanding, ongoing educational expansion at the tertiary level has triggered downward substitution processes among market entrants, leading better qualified leavers to take employment in lower-level occupations than in earlier times. But on the other hand, this trend may be offset by an increasing availability of more attractive professional employment positions. As long as both changes occur more or less in parallel, the aggregate attainment outcomes among market entrants will effectively be little changed.

These general interpretations do need some additional qualifications, however, and more so with respect to the effects of a professionalizing labour market rather than with respect to the impact of

educational expansion. In the latter case, the absolute predictions of Table 2 reveal the presence of floor effects, so that occupational attainment of the lowest qualified is little affected by educational expansion. The detrimental impact on microlevel returns to education is, however, evident for ISCED levels 3 to 7 in the case of status attainment and among tertiary level leavers with respect to access to professional employment positions. It should be noted that the argument is based on effects on absolute status scores and probabilities, rather than interaction terms in the non-linear models, which show no statistically significant results from Wald tests. In addition, there are some indications that expansion-induced downward substitution occurred more rapidly in Southern Europe as compared to the experiences in Northern European systems, notably at the level of professional positions. Whether this is related to some stable institutional feature of the Southern systems or simply represents catching-up phenomena cannot be decided on the basis of the current data. It should also be noted that there is also some evidence on small effects of educational expansion on initial unemployment risks. This effect, implying slightly rising unemployment risks mostly at the non-tertiary level and more strongly in Northern Europe, might indicate a trend towards outcompeting the lowest qualified. Compared to the cyclical movements, the effect is small, however, and apparently not very clearly identified.

Even more interesting is to trace the nature of the effects of professionalization, which actually represents the least uniform trend effect to be discussed in this paper. With respect to the interaction with levels of education, the findings closely parallel those reported for educational expansion. The lowest qualified do not benefit from the increased availability of professional employment, neither in terms of direct access nor indirectly in terms of more advantageous status attainment patterns due to upward substitution. Rather, it is primarily tertiary level leavers who strongly participate in professionalization trends in the labour force. A 1% increase in the proportion of professional positions results in an about one status score point increase and an almost 2% increase in the probability of professional employment for university graduates. Leavers from both upper secondary and lower tertiary levels are estimated to benefit somewhat less, yet still substantially in terms of status attainment, and direct access to such positions increases even disproportionately larger among lower tertiary leavers. Close to the expectations formed in the theoretical part of the paper, there are also some indications that market entrants in OLM context are able to benefit from this occupational upgrading in labour demand to a systematically larger extent than notably their counterparts in ILM countries. Evaluated at the grand mean, the unit effect for professionalization tendencies amounts to +0.85 status score points and a +1.7% increase in the probability of access to professional positions as compared to the respective figures of +0.09 and +0.3% in ILM systems. Even more compelling given the small sample of aggregate units, this interaction effect even reaches or barely misses a statistical significance level of $p<.10$ in the Wald tests provided in Table 2. The Southern systems are at an intermediate position between OLM and ILM contexts in that respect. Hence, the argument that OLM contexts tend to integrate market entrants more quickly into "regular" employment contexts appears to receive additional support, as market entrants in these systems participate most readily in and clearly benefit from current labour market changes.

In contrast to educational expansion, professionalization trends also exhibit important side effects on market entrants' unemployment risks. While the main effect is fairly similar in magnitude to the relatively small effect for educational expansion, this actually conceals an important interaction with levels of education: most drastically, ongoing professionalization appears to increasingly drive a wedge between unemployment risks of market entrants with compulsory schooling only and those with more advanced qualifications. While unemployment risks for ISCED levels 3 to 7 decrease or are at least little affected by increased professionalization, unemployment among the lowest qualified is estimated to increase substantially. A 1% increase in the proportion of professional employment results in an additional relative disadvantage of the lowest qualified with increases in relative unemployment rates of +1.1% to +1.8%. Moreover, there is no evidence that professionalization effects on unemployment differ across institutional contexts in labour markets.

Summary and Conclusions

Understanding changing labour force outcomes for those entering the labour market is an important element in understanding the nature of education-to-work transitions and the consequences of structural opportunities and constraints on their outcomes. Over the last decade, entering the labour market was increasingly perceived to be associated with rising unemployment risks and often less certain and lower-level occupational attainment than in previous times. Descriptively, both perceptions accurately reflect both rising unemployment rates among leavers from all educational levels in all European countries, notably at the lowest levels of qualifications, and somewhat declining initial occupational returns to education, notably at the tertiary level of education in at least many European countries. The analyses of the current paper show, however, that these changes can convincingly be related to the impacts of changing aggregate economic conditions on the one hand, and the effects of continued educational expansion and structural changes in the labour market on the other.

Increasing unemployment risks among market entrants are most directly related to the (cyclical) deterioration of aggregate economic conditions in Europe from the early 1990s onwards. That is, market entrants unemployment rose over the 1990s as compared to the situation of the late 1980s very much in line with the general rise of unemployment, and it began to fall again in those countries that experienced economic upswings by the mid- or late 1990s. In assessing these trends, it has also to be recognized that young people are generally affected disproportionately by such cyclical developments, as they are among the less competitive members of the work force. In particular, unemployment risks of market entrants with low levels of education prove to be very vulnerable to changing economic conditions. In contrast, declining youth cohort sizes have not affected market entry outcomes in the current sample.

While youth's unemployment risks were much affected by changes in the aggregate economic climate, ongoing structural changes in both labour supply and labour demand are found to have had strong impacts on changing patterns of occupational allocation among market entrants. More specifically,

increasing levels of education in the labour force have triggered downward substitution processes, which led to decreasing levels of occupational attainment among market entrants. This has affected leavers from all educational levels except for the least qualified where floor effects can be thought to operate. The impact of these downward substitution processes was particularly evident for the case of access to professional employment positions, where employment prospects of leavers from lower tertiary education were affected decidedly more negatively than those of university graduates. In part, such downward substitution tendencies were, however, offset by professionalization tendencies in labour demand. Leavers from tertiary level education have indeed in general been able to benefit from the increasing availability of highly-skilled professional positions so that often only little net changes in occupational attainment have occurred. In line with institutional arguments about strong occupational labour markets, market entrants in OLM system countries have profited more strongly from such labour market changes than has been the case in the more flexible ILM systems. Still, the major implication of the operation of two such counteracting structural mechanisms is that further net changes will occur as soon as developments happen in less balanced ways than has been the case in many European countries over the last decade.

But how are the chances for such detrimental, less balanced structural changes to actually occur? Empirically, the correlation between both measures has been very high in Europe over the last decade (cf. Table 4 below). That is, in countries with a large proportion of tertiary graduates in the labour force, there was typically also a large proportion of highly-skilled professional employment positions. The more interesting point is presented by the lagged correlation coefficients given in Table 4, which show increasing correlations with current occupational structure the more distant in time the measure of qualificational structures. This might be interpreted in a way that educational expansion acts as to catalyze subsequent changes in labour market demand, which employ the increased availability of highly skilled individuals. In this interpretation, structural changes in the labour market are intimately linked, with educational expansion inducing further, but time-lagged labour force changes. Seen that way, educational expansion becomes less of a mere credentialist trend but more of a powerful political tool which triggered huge productivity increases, and declining individual level returns to education might actually be considered as a relatively transitory phenomenon accompanying a certain adjustment period until labour demand has also shifted. Suggestive as this is, it seems to be of uttermost importance to arrive of a better understanding of precisely that nexus in order to gain a more robust interpretation of results of overeducation and declining returns to education.

Table 4 Educational Expansion and Labour Force Professionalization, Bivariate Correlations

	% Tertiary Degrees					
% Professional Employment 1997	1997	1996	1995	1994	1993	1992
(1) n = 11	0.744	0.725	0.768	0.810	0.825	-
(2) n = 8	0.659	0.628	0.690	0.748	0.767	0.770

Notes: (1) excluding Austria, and (2) excluding Austria, Belgium, Denmark and France

Source: European Community Labour Force Survey 1988-1997

More disconcerting than the above tendencies actually is the established impact of labour force professionalization on market entrants unemployment risks. Here it seemed that the changing nature of labour demand tended to drive a wedge between unemployment risks of the least qualified leavers and those with more advanced levels of education. While unemployment risks among the latter educational groups were unaffected or even declined with ongoing professionalization trends, unemployment rose sharply in relation to professionalization among those with compulsory education only. It is the group of the lowest qualified that appears to be increasingly less able to secure employment in fastly changing labour markets. If that finding were to be substantiated in further research, the implication is to invest heavily into the training of the least qualified so as to enable them to meet the qualification requirements of increasingly modernizing economies.

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